

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Brian Joseph Dillenburg :
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For: SYSTEMS AND METHODS FOR :
: DEVELOPING AND :
: DISTRIBUTING SOFTWARE :
: COMPONENTS :
:

AFTER FINAL AMENDMENT

Mail Stop: AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Final Office Action dated November 30, 2007, applicants request reconsideration in view of the following amendments and remarks.

IN THE CLAIMS:

1. (Previously Presented) A method for distributing software components to a plurality of computer stations that each analyze products, said method comprising:

accessing a test management system that is located remotely from the computer stations, the test management system storing a plurality of software components;

obtaining at least one of the software components that includes information used by a computer station which communicates with a test station to analyze a product; and

distributing the software component, from the test management system, to the computer station automatically based on at least one of an identification of the test station and an identification of the product.

2. (Currently Amended) A method in accordance with Claim 1 wherein said obtaining step comprises downloading, to the computer station, an equipment file set including said software component, said equipment file set directing the computer station to operate an instrument, said equipment file set being uniquely associated with the computer station and independent of the product.

3. (Currently Amended) A method in accordance with Claim 1 wherein an instrument is used to test the product and said obtaining step comprises downloading at the computer station an equipment file set including said software component, said equipment file set directing the computer station to analyze the product, said equipment file set being uniquely associated with the computer station and the instrument and said equipment file set being independent of the product.

4. (Currently Amended) A method in accordance with Claim 1 wherein said obtaining step comprises downloading at the computer station a test program set, said test program set directing the computer station to analyze the product, and said test program set being uniquely associated with the product and being associated with the computer station.

5. (Currently Amended) A method in accordance with Claim 1 wherein an instrument is used to test the product, said obtaining ~~step~~ comprises downloading at the computer station a test program set, said test program set directing the computer station to analyze the product, and said test program set being uniquely associated with the product and being associated with the computer station and the instrument.

6. (Original) A method in accordance with Claim 1 further comprising testing the product with an instrument based on the software component, wherein the instrument is at least one of a power supply, a communication analyzer, a signal generator, and a frequency counter.

7. (Currently Amended) A method in accordance with Claim 1 wherein said obtaining ~~step~~ comprises downloading at the computer station at least one of a communication file, a configuration file, a calibration file, a test executive file, a test sequence file, a specification file, and a test step execution file.

8. (Original) A method in accordance with Claim 1 wherein an instrument is used to test the product and further comprising storing in a database multiple equipment file sets, each equipment file set including at least one file identifying communications protocols between the computer station, the product and the instrument used to test the product.

9. (Original) A method in accordance with Claim 1 further comprising storing in a database multiple equipment file sets, each equipment file set including at least one file identifying a calibration for an instrument to be used by the computer station to analyze the product.

10. (Original) A method in accordance with Claim 1 wherein the information relates to analyzing at least one of a printed circuit board assembly, a combination of the printed circuit board assemblies, a module, a circuit pack, a field replaceable unit (FRU), a processor, a memory, and a cable.

11. (Currently Amended) A method in accordance with Claim 1 further comprising storing, in a database, multiple test program sets, each of which includes at least one test step execution file that identifies steps to be executed by an instrument configured to test the product, wherein said obtaining ~~step~~ comprises accessing the test step execution file.

12. (Previously Presented) A method in accordance with Claim 1 wherein said test management system comprises a management file service accessed by the computer station to download software component updates.

13. (Original) A method in accordance with Claim 1 further comprising storing a relationship between the software components, products, instruments, and computer stations.

14. (Original) A method in accordance with Claim 1 further comprising storing in a database information identifying multiple products, test stations used to test each product, instruments used to test the products, and fixtures used to hold the products.

15. (Previously Presented) A management system database configured to be used with a computer station that operates an instrument when analyzing a product, the database storing software components that are configured to be executed by the computer station to communicate with and operate the instrument in order to analyze the product, said database located remotely from said computer station and automatically accessing said software components based on identification of at least one of the computer station, the instrument and the product.

16. (Original) A database in accordance with Claim 15 wherein said software components are organized into at least one equipment file set defining a station specific test solution to be executed by the computer station to direct the instrument to perform a test solution, said equipment file set being uniquely associated with the computer station and the instrument, said equipment file set being independent of the product.

17. (Original) A database in accordance with Claim 15 wherein said software components are organized into at least one test program set that defines a product specific test solution to be executed by the computer station to direct the instrument to perform a test solution on the product, said test program set being uniquely associated with the product, said test program set being associated with the instrument and the computer station.

18. (Original) A database in accordance with Claim 15 wherein said software components correspond to at least one of a communication file, a configuration file, a calibration file, a test executive file, a test sequence file, a specification file, and a test step execution file.

19. (Original) A database in accordance with Claim 15 wherein said software components are configured to control the computer station to analyze at least one of a printed circuit board assembly, a combination of printed circuit board assemblies, a module, a circuit pack, a field replaceable unit (FRU), a processor, a memory, and a cable.

20. (Original) A database in accordance with Claim 15 wherein said software components define an equipment file set that, when executed by the computer station, calibrates an instrument to execute a test sequence.

21. (Previously Presented) A system comprising:

a computer station configured to control operation of an instrument as the instrument analyzes a product, said computer station controlling the instrument based on an equipment file set;

a test station communicating with said computer station and said instrument; and

a management system database located remotely from said computer station and in communication with said computer station, said database storing said equipment file set, said database being accessible by said computer station, wherein said computer station controls said instrument during analysis of the product based on said equipment file set, and wherein said equipment file set includes a set of software components associated with said test station and independent of said product.

22. (Previously Presented) A system in accordance with Claim 21 wherein said computer station controls said instrument during analysis of the product based on said equipment file set and a test program set, wherein said test program set is stored by said database and includes a set of software components that are specific to the product and associated with at least one of said computer station and said instrument.

23. (Canceled)

24. (Original) A system in accordance with Claim 21 wherein said product is one of a printed circuit board assembly, a module, a circuit pack, a field replaceable unit (FRU), a processor, a memory, and a cable.

25. (Original) A system in accordance with Claim 21 wherein the equipment file set includes at least one of a communication file, a configuration file, a calibration file, a test executive file, a test sequence file, and a specification file.

26. (Original) A system in accordance with Claim 21 further comprising a developer file that enables a user to track relationships between said instrument and said computer station.

27. (Original) A system in accordance with Claim 21 further comprising a pre-release tool that is used to release information generated in a developer file.

28 -33 (Cancelled)

Remarks

Claims 1-22 and 24-33 were pending in this application, from which claims 28-33 have been cancelled without prejudice or disclaimer of the subject matter therein. Claim 23 was previously canceled. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter. The above amendments to certain dependent claims are merely to correct antecedent basis, and are not substantive. By cancelling claims 28-33 it is believed that this amendment reduces the remaining issues. Thus, this amendment should be entered after final.

Claims 1, 4-7 and 10-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Amberg (U.S. Patent No. 5,963,743) in view of Kittross et al. (U.S. Patent No. 6,681,351), and further in view of Mutchler et al. (U.S. Patent No. 6,689,157). Claims 2, 3, 8, and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Amberg in view of Kittross in view of Mutchler and further in view of Proskauer (U.S. Patent No. 5,828,674). Claims 13 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kittross in view of Mutchler and further in view of Blitz (U.S. Patent No. 6,047,293). Claims 15-22, 24 and 25 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Amberg in view of Kittross in view of Proskauer and Amberg. Claims 26-33 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kittross in view of Proskauer and further in view of Blitz. Applicant respectfully traverses these rejections for reasons set forth hereafter.

Beginning with claim 1, it is submitted that the outstanding Office Action fails to set forth a prima facie case of obviousness as no legitimate reason has been provided for modifying the primary reference to Amberg in the suggested manner. Amberg concerns an apparatus for installing software on "build-to-order" computers. Amberg is assigned to Dell, for which the build to order business model is quite fundamental and unrelated to the field of the present claims. Amberg's apparatus installs and tests the software on the computer when the computer is built, which fundamentally differs from the invention of claim 1. Claim 1 concerns a method for distributing software components to a plurality of computer stations that each analyze products. The method of claim 1 specifically states that the software components include information used

by a computer station which communicates with a test station to analyze a product. Amber's apparatus does not access nor obtain any such software. It necessarily follows that Amber's apparatus could not, and does not, distribute software components automatically based on at least one of an identification of the test station and an identification of the product.

The Office Action seeks to address the foregoing deficiencies of Amberg by applying a secondary reference (Kittross) and a tertiary reference (Mutchler). Yet when the teachings of Amberg are compared to the drastically different and diverse teachings of Kittross and Mutchler, it is clear that the combination is based solely on improper hindsight reconstruction.

Amberg's teachings are entirely unrelated to test stations that analyze products and are entirely unrelated software components that include information used by a computer station to communicate with a test station to analyze a product. While Kittross and Mutchler are related to the general field of computer stations that analyze products, as acknowledged in the prior response, Kittross and Mutchler lack certain key elements of the claimed invention. Kittross describes a test procedure for testing a device using automatic test equipment (ATE) 20. Among other things, Kittross describes a method of transmitting test procedures from the test element database to the local memory, each of which is located in the same ATE. As such, Kittross does not describe a method for distributing software components from a test management system that is located remotely from the computer station.

Mutchler describes a method of installing and configuring a test suite for a unit under test (UUT) in an automated assembly process. In Mutchler, a user inputs an identifier into the UUT. The identifier is received by a test suite server 130 that retrieves a Bill of Materials corresponding to the UUT from an IT server 140. Test files and other files specific to the Bill of Materials are then generated by the test suite server 130 and copied to the UUT. Mutchler describes distributing a software component (the test suite) directly into the product being tested (the UUT), i.e. directly from the file server into the product which performs a self test. Mutchler does not distribute a software component from a test management system to a computer station to communicate with a test station that is used to analyze a product.

To the extent that a person of ordinary skill would have a reason to implement a software distribution method in the relevant field, that person would look to the teachings of Kittross and

Mutchler, not to the teachings of Amberg. The person of ordinary skill would have no reason to take Amberg basic system for constructing build-to-order computers and implement it to distribute software components to computers that are already built and already in the field and running. Instead, it is submitted that Kittross and Mutchler teach specific methods for installing software in the relevant field, and both install the software directly on the ATE or UUT which differs from the claimed invention. As such any method for installing software for test stations that analyze products would necessarily include the software installation methods taught by Kittross and Mutchler. Thus, the rejection of claim 1 is improperly based on hindsight reconstruction and should be withdrawn.

Turning to the obviousness rejection of claims 2, 3, 8 and 9, Applicant submits that Proskauer fails to make up for the deficiencies noted above and in the outstanding Office Action of the three previously applied references. Proskauer describes a test system that includes a PC workstation 2000, a tester 2002, and a semiconductor handler 2004. The workstation 2000 includes an operator controls section 2022 that is installed within workstation 2000 and is loaded with a library of handler drivers. During use, an operator selects a handler from a menu of available handler drivers that are installed on the local workstation, connects it, and enables it.

Claims 2 and 3 specifically provide that the equipment file set is “independent of the product.” Proskauer is silent as to what relation exists between the handler drivers and products. Proskauer’s handler drivers are installed directly in a single workstation; they are not distributed from a test management system to a remotely located computer station.

Claim 8 further defines the equipment file set to include a file identifying a communications protocol between the computer station, the product and the instrument used to test the product. The Office Action cites to portions of column 6 in Proskauer as allegedly teaching the claimed limitation. The undersigned strenuously disagrees. Column 6 of Proskauer does not suggest including a protocol identification file in an equipment file set. Proskauer’s handler driver 2024, handler tester control 2026 and interface 2008 do not create, nor save, the claimed protocol identification file. In fact, Proskauer does not need a protocol identification file as Proskauer’s handler drivers are written and stored directly on a single workstation. In contrast, in claim 8, the protocol identification file (as part of the equipment file set) is distributed automatically to remote computer stations.

Claim 9 further defines the equipment file set to include a file identifying a calibration for an instrument to be used by the computer station to analyze the product. The Office Action cites to portions of column 6 of Proskauer as allegedly teaching the claimed limitation. The undersigned strenuously disagrees. Column 6 of Proskauer also lacks any true discussion of the claimed calibration file.

Turning to the obviousness rejection of claims 13 and 14, Applicant submits that Blitz fails to make up for the deficiencies noted above and in the outstanding Office Action of the three previously applied references. Blitz describes a semiconductor test system in which a spreadsheet workbook has one or more spreadsheets containing nested levels of name device parameter data. Blitz, like Proskauer describes that the handler drives are installed in the operator controls section 2022 located within workstation 2000. As such, Blitz does not describe a method for distributing software components from a test management system that is located remotely from the computer station automatically based on at least one of an identification of the test station and an identification of the product as recited in Claim 1. In view of the foregoing, it is submitted the claims 1-14 are patentable over the cited art.

Turning to the obviousness rejection of claims 15-22, 24 and 25, Applicant submits that the outstanding Office Action fails to set forth a prima facie case of obviousness. No legitimate reason exists to modify the combined teachings of Kittross and Proskauer based on Amberg. Claim 15 recites a management system database configured to be used with a computer station that operates an instrument when analyzing a product, wherein the database stores software components that are configured to be executed by the computer station to communicate with and operate the instrument in order to analyze the product, the database is located remotely from the computer station and automatically accesses the software components based on identification of at least one of the computer station, the instrument and the product.

As acknowledged in the Office Action, Kittross and Proskauer fail to locate a database remote from the computer station. Amberg allegedly makes up for this deficiency. Amberg's teachings are entirely unrelated to the pertinent field, namely a management system database configured to be used with a computer station that operates an instrument when analyzing a product. It is significant to note that, while Kittross and Proskauer are within the relevant field, they specifically teach to install software directly on the ATE and workstation, respectively. The

only reference relied on in the outstanding Office Action as allegedly teaching to distribute software to remote computer stations is Amberg. Amberg's build-to-order computers fundamentally differ from the claimed database. As such, Amberg does not make up for the deficiencies of Kittross and Proskauer with respect to Claim 15. Accordingly, Claim 15 is submitted to be patentable over the cited art for at least the reasons set forth above.

Applicant traverses the rejection of claim 21. Claim 21 recites a system comprising, among other things, a computer station configured to control operation of an instrument as the instrument analyzes a product, a test station communicating with the computer station and the instrument, and a management system database located remotely from the computer station and in communication with the computer station, wherein the database stores an equipment file set and the equipment file set includes a set of software components associated with the test station and independent of the product.

As acknowledged in the Office Action, Kittross and Proskauer fail to locate a database remote from the computer station. Amberg allegedly makes up for this deficiency. As explained above, Amberg's teachings are entirely unrelated to the pertinent field and would not provide any legitimate reason to make the modification suggested in the Office Action.

In view of the foregoing amendments and remarks, all the Claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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Dean D. Small, Reg. No.: 34,730
THE SMALL PATENT LAW GROUP, LLP
611 Olive Street, Suite 1611
St. Louis, Missouri 63101
(314) 584-4081